

**Leak Detection System Of Hard Disk Drives  
With Lubricant Reservoir**

**Abstract**

A method for detecting leakage from a disk drive enclosure includes providing a lubricating composition having a lubricating material and a tag material therein. The tag material has a volatility characteristic that is amenable to analysis. The method includes measuring a concentration of the tag material in the vapor phase. By measuring a concentration of the tag material, a leak rate of the lubricating material can be determined. The lubricating composition may include a perfluoropolyether lubricating material and a halogenated sulfur tag material such as  $\text{SF}_6$  and/or  $\text{S}_2\text{F}_{10}$ .

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